Environmental Stewardship

U.S. Environmental Protection Agency
5th State and Local Climate Change Partners' Conference

November 20, 2002
James M. Crites
Executive Vice President

Establishing a Vision

Motivation: ***"Dad, change the air"***

Jonathan Crites

Plan: ***"Action without philosophy is a lethal weapon; philosophy without action is worthless"***

Soichiro Honda

Implementation: ***"Gung Ho"***
(working together)

Chinese view of USMC

DFW International Airport Overview

- Generates $11.2B annually to North Texas economy and supports some 211,000 area jobs.
- Ranked sixth in serving 55M passengers; 4.6M were international passengers
- Ranked third in operations totaling over 783,000
- Substantial source of
  - economic activity
  - air emissions
  - electric power and resource consumption

Federal Regulations

AHERA	Asbestos Hazard Emergency Response Act
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CWA	Federal Water Pollution Control Act/Clean Water Act
EPAct	Energy Policy Act
EPCRA	Emergency Planning and Community Right to Know
ESA	Endangered Species Act
FIFRA	Federal Insecticide, Fungicide and Rodentcide Act
NEPA	National Environmental Policy Act
OPA	Oil Pollution Act
PPA	Pollution Prevention Act
RCRA	Resource Conservation and Recovery Act
TSCA	Toxic Substances Control Act

Intent of Federal Regulations

- Environmental Rules and Regulations are intended to:
  - ***Prevent*** contamination of the environment
  - ***Report*** to appropriate parties (response)
  - ***Contain*** pollution and ***cleanup*** affected environment
- Airport's View of Rules and Regulations
  - Traditional View: Compliance
  - Modern View:
    - Environmental Stewardship
    - Sustainable Development
    - Win-win

Environmental Policy

Recognizing its leadership role in

environmental stewardship

for Dallas, Fort Worth and the Region

DFW International Airport

is committed to protecting the environment

by ensuring the environmental quality and compatibility of its

operations, procurement, energy conservation

and development efforts

Federal Air Quality Issues

- The “DFW Metroplex” was designated as a Serious Non-attainment Area For Ozone in 2001 requiring a new **State Implementation Plan (SIP)**
- The FAA now requires **“General Conformity”** with the 1990 Clean Air Act Amendments in addition to the National Environmental Policy Act (NEPA)
- Capital Improvement Program Projects are subject to General Conformity and the NEPA process

Noise is no longer the only or dominant airport environmental issue

FAA – General Conformity

- FAA began requiring demonstrations of General Conformity in April 1997 as part of the NEPA process
- General Conformity *currently* requires consideration of both "Direct" and "Indirect" emissions
- FAA *cannot* authorize, approve, or support any action which creates air emissions that are not included in the State Implementation Plan (SIP) for air quality

Failure to conform with air quality emissions identified in the "SIP" will prevent airport development

Clean Air Policy

Recognizing the importance of clean air to
Dallas, Fort Worth and the Region,
the Dallas/Fort Worth International Airport Board
is committed to improving air quality by
reducing air pollution from Airport operations
and increasing energy efficiency

Clean Air Principals

- Clean Vehicle Programs
- Development of supporting infrastructure
- Industry collaboration
- Travel demand management
- Airport-specific R&D
- Innovation

Clean Fleet Programs

- DFW Airport Fleet
- Airline GSE Electrification
- Contract Service Providers
  - Employee Transit
  - Construction Equipment
- Commercial Ground Transportation Providers
  - Taxi – Shared-Ride - Limousine

Customer Service

- Parking Guest Assistance Vehicles
  – Toyota Hybrid Electric Prius

Airline Ground Service Equipment (GSE) Electrification

- Current GSE NOx emissions 5 tons per day (tpd)
- Over 2,150 units in service
- Over 530 electric GSE units in service at DFW, mostly operated by American Airlines

FAA Inherently Low Emission Airport Vehicle (ILEAV) Pilot Program

Memorandum of Agreement with TCEQ to reduce GSE NOx emission to 0.56 tpd by 2007

DOT/FAA ILEAV Pilot Program supporting the deployment of Electrically Powered GSE

Department of Public Safety

- Patrol Vehicles – Ford CNG Crown Victoria
- 2001 Special Reaction Team LDV truck, Freightliner chassis, dedicated CNG 5.9L Cummins, 29,000 GVWR

Airport Maintenance Vehicles

- Al-Tec model AA600P 51 foot bucket truck, Caterpillar 3126 duel fuel engine
- 2001 Batts Deicing Fluid Application Vehicle, Freightliner Class 8 chassis, Caterpillar C12 duel fuel engine

Passenger/Employee Transport

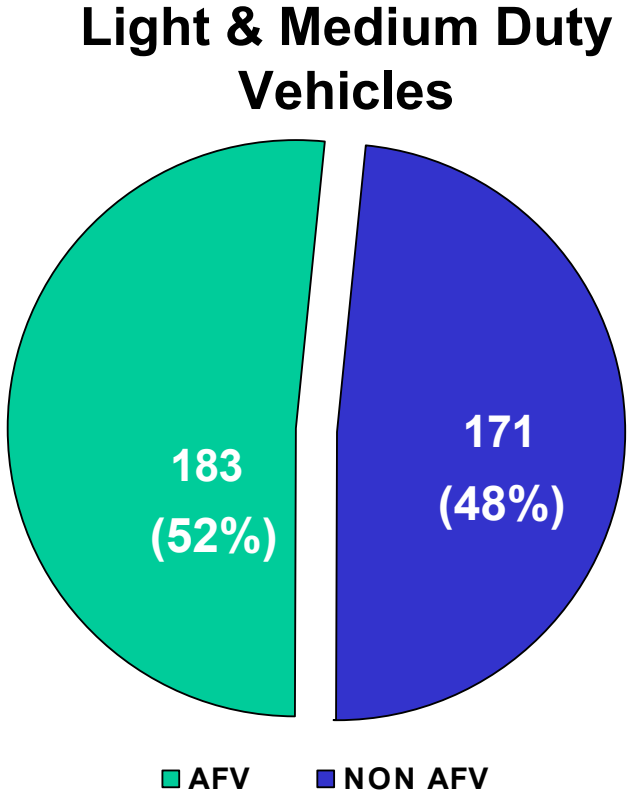
- Conversion of all passenger and employee transport vehicles to CNG

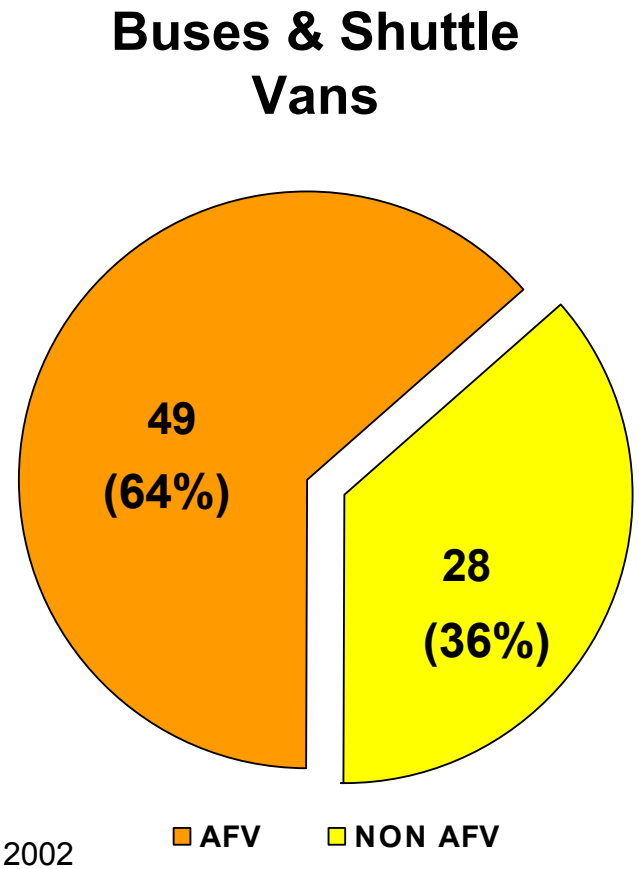
Fueling Infrastructure

Public Access CNG Refueling Station

- Dual hose/dual pressure
- Three bank storage - 36,000 scf
- 725 cfm compressor

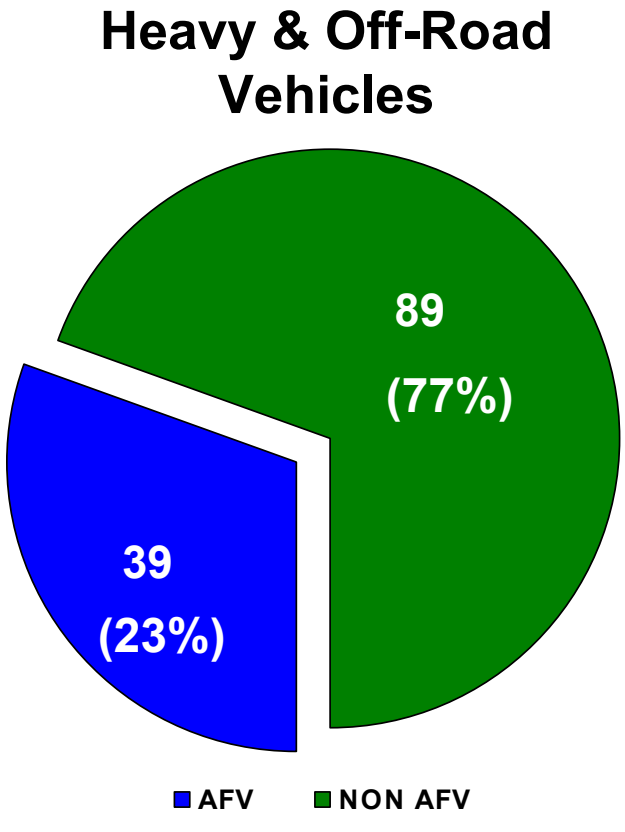
DFW Fleet Conversion Status





As of September 25, 2002

DFW Fleet Conversion Status



As of September 25, 2002

Clean Vehicles on Order:

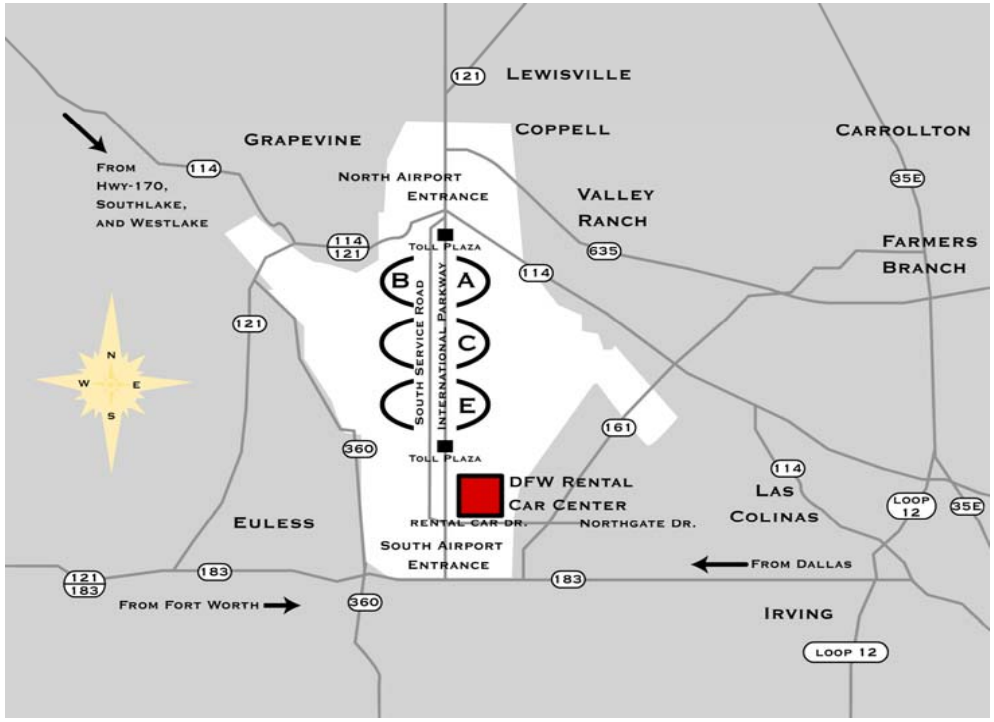
- 13 Light & Medium Duty
- 8 Buses & Shuttle Vans
- 12 Heavy Duty & Off Road

FY2004 Plan

100% Light & Medium Duty

72% of Heavy Duty & Off Road

Travel Demand Management



- Consolidated Rental Car Busing Operation (initiated March 1998)
- Reduced mileage driven by approximately 70%
- One fleet of 40 buses traveling a shorter distance
- Estimated NOx reductions are almost 1 ton per day
- Win – win
  - Customer service
  - Lower cost
  - Lower emissions

Energy Management

- Energy Efficiency Program
- Design Criteria, Energy Efficient Building Code, Commissioning Policy
- Aircraft Ground Power and Preconditioned Air
- Future Plans and Opportunities

Energy Efficiency Program

- Initiated in 1995
- Based on 3 Primary Elements
  - Sound operation and maintenance practices
  - Retrofits where economically and technically feasible
  - Incorporation of energy efficiency into new construction
- Dedicated Energy Engineer/Manager
- *Energy consumption avoided to date is estimated at over 20 billion MBTU*

Design Criteria, Energy Efficient Building Code, Commissioning Policy

- Design Criteria Manual
  - Provides guidance to designers
- Energy Efficient Building Code
  - 2000 International Energy Conservation Code
  - Adopted in May 2000
  - Mandated State-wide in September 2001
- Commissioning Policy
  - Establishes a Commissioning Authority
  - Approved Cx plan required for Construction Application and Certificate of Occupancy
  - Integrated into ***Environmental Management System*** and Design Criteria

Aircraft Ground Power and Preconditioned Air

- APU use produces 0.3 tpd NOx currently, rising to 0.4 tpd in 2007 under business as usual scenario
- 400 Hz power (centralized or point-of-use) currently available at 108 of DFW's 127 gates
- Centralized Preconditioned Air Systems operated by American and Delta
- Point-of-use PCA operated by Continental
- Terminal D gates will provide centralized ground power and PCA

Future Plans and Opportunities

- Sustainable Development (LEEDS)
  - Terminal F
  - Terminal Re-life Program
- Performance Measurement
  (Green Airport Index)
- Product Purchasing Policy Enrichment
- Diesel Equipment Retrofit Technologies
- Onsite Power Generation – Plasma Potential
- Perimeter Taxiways
- Regional Rail Connection

Environmental Management System (EMS)

- EPA has been evaluating new initiates to assist organizations with systematically managing compliance with environmental legislation
- EMS is one tool being emphasized to improve environmental compliance and to foster environmental performance and stewardship throughout facility operations
- EMS follows an approach of “plan, do, check, and act” which is a systems methodology rather than the traditional command and control approach

EMS - Key to Environmental Stewardship

- DFW is implementing an EMS based upon EPA's Corporate Compliance Criteria for an Effective Program to Prevent and Detect Violation of Law [the twelve (12) elements of EPA's compliance-focused model]
- DFW recently applied for acceptance into EPA's EMS Performance Track Program
- The entire effort was performed "in-house" by DFW Board employees promoting ownership and exhibiting a top-to-bottom commitment to environmental stewardship
- Integrating the environment into everyday business operations
- Environmental stewardship becoming a part of the daily responsibility for employees across the entire organization, not just in the environmental department

Benefits

- Improves working relationships between Departments and furthers environmentally related cost efficiency over time
- Is dynamic, recognizing DFW's ever-changing operations landscape and continuously emerging environmental laws and regulations
- Implementation is consistent with the expectations of the regulatory enforcement agencies at all levels of government and accesses DFW to governmental public policy incentives
- Makes environmental compliance at DFW transparent
- Encourages and facilitates the establishment of a corporate culture commitment to sustainable environmental stewardship

Establishing a Vision

Motivation: ***"Dad, change the air"***

Jonathan Crites

Plan: ***"Action without philosophy is a lethal weapon; philosophy without action is worthless"***

Soichiro Honda

Implementation: ***"Gung Ho"***
(working together)

Chinese view of USMC

Environmental Stewardship

U.S. Environmental Protection Agency
5th State and Local Climate Change Partners' Conference

November 20, 2002
James M. Crites
Executive Vice President